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REPORT

of the

EIGHTEENTH NORTHEASTERN CORN IMPROVEMENT CONFERENCE

New York City
February 22-23, 1963

Reported by
G. F. Sprague, Secretary

Crops Research Division
Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE
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REPORT OF THE EIGHTEENTH NORTHEASTERN CORN IMPROVEMENT CONFERENCE

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MORNING SESSION, February 22

The meeting of the Northeastern Corn Improvement Conference was called to order by Chairman D. L. Matthews at 9:00 a. m. Following introductions the Chairman appointed a Nominating Committee, consisting of G. W. Gorsline, Chairman; M. W. Johnson and R. G. Rothgeb, to select candidates for Vice-Chairman for 1963.

H. R. Fortmann, Administrative Advisor to the Conference, reported on new procedures for handling Regional Funds. These are to be appropriated directly to the States. The precise formula for allocation remains to be agreed upon. Regional projects still require regional approval following which each Director can furnish support on the basis of local needs and priorities.

The Conference then received reports from the several standing committees. These reports are presented in the following sections.

REPORT OF THE COMMITTEE ON THE UNIFORM TESTS OF 100-200 MATURITY

A ten line diallel set of single crosses were made in Pennsylvania, but because of seed shortage, only a nine line diallel set including CO 113, CO 125, CO.150, CO 158, CO 109, Q163, A495, Pa 32 and A509 were tested in Quebec, New York and Pennsylvania. A summary of the data is presented in table 1. Severe drouth conditions occurred in Pennsylvania and cool weather in Canada. Relationship between yields of hybrids at these locations is rather poor. However, grain moisture and silking data agree very well. All double crosses except those involving CO 150 x Q163 at Quebec and New York were predicted for all characters shown in the table. Such data are available to interested persons.

R. M. Bailey
R. I. Brawn
L. S. Donovan
H. L. Everett
W. I. Thomas, Chairman

Table 1. Summary of performance of NECIC single crosses (100-200 maturity) grown in 3 locations in 1962.

Hybrid	Pennsylvania			Quebec				New York			Ave.
	% Grain Moisture	Yield bu/A	% Broken stalks Mid-silk	% Grain Moisture	Yield bu/A	Mid-tassel	% Lodged	% DSG	% Water	Yield bu/A	Yield bu/A
CO113 X CO125	21.1	63	3 61	33.9	101	62	3	47.4	38.5	58.7	74
CO113 X CO150	15.6	63	4 65	39.9	97	64	3	48.8	43.3	89.9	83
CO113 X CO158	22.5	59	7 60	36.0	96	60	3	50.9	39.2	82.5	79
CO113 X CO109	21.7	63	4 62	36.6	117	65	0	55.2	35.9	108.8	96
CO113 X Q163	25.9	67	6 63	41.7	110	65	3	46.3	44.1	83.2	87
CO113 X A495	27.2	58	2 67	38.3	105	68	3	50.9	39.1	95.2	86
CO113 X PA. 32	24.8	67	2 65	41.1	112	64	0	45.9	44.3	81.4	87
CO113 X A509	27.2	52	8 63	39.3	115	64	3	46.5	44.3	79.0	82
CO125 X CO150	20.9	52	11 63	33.0	103	62	3	50.7	36.2	73.3	76
CO125 X CO158	20.6	60	6 60	30.9	98	59	3	51.1	35.9	64.9	74
CO125 X CO109	20.0	56	6 63	29.0	109	64	0	56.0	31.3	80.6	82
CO125 X Q163	19.3	50	6 62	30.4	102	62	0	51.6	31.8	74.9	76
CO125 X A495	21.6	54	1 67	33.0	106	66	3	51.7	35.7	86.7	82
CO125 X PA. 32	23.0	66	2 66	36.2	105	67	0	48.3	38.1	82.7	85
CO125 X A509	20.4	51	3 63	31.9	102	63	3	48.2	34.1	64.0	72
CO150 X CO158	20.5	58	5 60	34.0	90	61	7	50.2	41.5	82.2	77
CO150 X CO109	19.0	60	6 64	31.4	119	65	0	57.4	32.2	96.2	92
CO150 X Q163	21.9	50	11 63								
CO150 X A495	24.3	55	2 68	40.0	108	69	3	48.6	41.7	84.5	83
CO150 X PA. 32	24.1	66	2 67	38.8	100	68	0	49.1	40.2	89.5	85
CO150 X A509	22.7	52	5 67	38.5	103	68	3	49.2	37.8	75.6	77
CO158 X CO109	19.9	58	8 62	32.0	115	63	3	55.1	35.4	92.1	88
CO158 X Q163	23.6	47	10 61	39.7	98	63	3	44.5	45.6	68.7	71
CO158 X A495	23.6	60	5 64	37.3	105	64	0	53.6	36.5	98.8	88
CO158 X PA. 32	22.8	51	4 62	36.8	97	64	0	50.4	39.2	87.1	78
CO158 X A509	21.8	52	3 61	34.9	93	61	0	49.5	37.7	78.5	75
CO109 X Q163	22.0	48	15 65	36.5	133	68	0	52.4	38.2	98.8	93
CO109 X A495	22.2	47	3 67	35.2	118	70	3	53.1	37.8	99.0	88
CO109 X PA. 32	20.6	63	2 65	35.4	116	69	0	54.8	33.9	102.1	94
CO109 X A509	20.2	55	3 64	32.9	125	67	3	54.4	33.3	103.3	94
Q163 X A495	25.9	41	1 67	39.6	120	69	3	50.1	40.4	106.4	89
Q163 X PA. 32	26.6	66	4 66	40.4	113	69	3	46.0	44.0	80.8	87
Q163 X A509	24.3	49	3 65	39.5	126	67	0	47.6	40.0	87.0	87
A495 X PA. 32	24.7	59	1 69	40.6	96	71	3	51.0	39.3	119.2	91
A495 X A509	23.1	49	0 66	37.3	109	68	3	50.1	37.4	87.7	82
PA. 32 X A509	23.1	71	2 65	38.0	114	67	0	49.4	37.7	104.4	96
N.E. 144	22.2	54	8 65	34.8	100	66	7	52.4	38.4	79.3	78
PA. 215	24.3	68	5 67	37.3	104	68	7	50.1	39.1	95.7	89
CORNELL M3								49.3	41.1	103.3	
CORNELL M4								47.6	42.0	100.3	
NE 310								48.2	40.4	72.7	
A.E.S. 101				30.8	87	62	0				
AVERAGE	22.6	57	5 64	36.1	107	65	2		38.6	87.5	86
LSD(.05)	1.8	14	7 2							16.5	

REPORT OF THE COMMITTEE ON THE UNIFORM TESTS OF 300-500 MATURITY

A diallel series of single-crosses involving 10 inbred lines were tested in Pennsylvania, Massachusetts and New York. The 10 lines and their yield performance when averaged over all crosses are shown below. Since there is some relationship among some lines a more valid comparison may be made by averaging the five highest combinations involving each line.

Line	Average all combinations	5 High combinations
NY821	95.7	101.7
ES55-157	91.0	97.0
W182-D	89.8	96.7
NYD410	89.2	92.0
Pa41	86.1	92.3
Pa55	85.7	90.5
C153	85.5	89.7
Pa409	84.4	87.0
PaB8B	82.8	89.8
W37A	82.5	83.6

The single-cross data averaged over all locations is presented in table 2.

G. W. Gorsline
C. E. Manchester
H. M. Yegian
H. L. Everett, Chairman

Table 2. Summary of performance of 45 single crosses (300-500) maturity grown in 3 locations in 1962. (Massachusetts, New York and Pennsylvania).

Single Cross	Average % Water	Average Yield Bu/Acre
W182D X NY821	36.4	107.0
PA41 X NY821	36.1	103.0
PA409 X NY821	37.3	99.8
C153 X NY821	35.3	99.3
ES55-157 X NY821	35.9	99.3
ES55-157 X W182D	35.6	98.5
ES55-157 X NYD410	36.2	97.9
PA55 X W182D	35.0	97.6
ES55-157 X PA55	34.0	96.3
ES55-157 X PA41	33.8	93.0
NYD410 X PA41	36.0	92.0
ES55-157 X PA55	33.2	92.0
PA55 X NYD410	36.4	91.8
PAB8B X NY821	34.6	91.5
ES55-157 X PA409	35.3	91.3
NYD410 X NY821	36.4	90.9
ES55-157 X PAB8B	33.7	90.9
NYD410 X W182D	36.6	90.7
PA41 X PAB8B	31.6	90.3
C153 X W182D	35.7	89.5
ES55-157 X W37A	33.0	89.5
C153 X PAB8B	33.1	88.9
NYD410 X PAB8B	32.9	88.5
PA409 X W182D	35.0	88.1
PAB8B X W182D	32.9	87.6
W37A X NY821	35.7	87.4
PA55 X W37A	34.8	87.2
C153 X NYD410	34.3	85.7
C153 X PA41	33.9	85.2
PA55 X PA409	35.2	85.0
PA55 X PA41	34.3	84.3
NYD410 X PA409	37.4	83.9
PA55 X NY821	34.4	83.1
NYD410 X W37A	34.1	81.3
W37A X W182D	35.1	81.0
C153 X W37A	32.8	80.9
PA41 X PA409	36.1	80.1
PA409 X W37A	33.0	78.7
PA41 X W37A	34.2	78.4
PAB8B X W37A	31.9	78.3
C153 X PA409	36.2	77.5
PA409 X PAB8B	34.1	75.0
PA41 X W182D	34.1	68.4
C153 X ES55-157	36.5	66.6
PA55 X PAB8B	35.5	54.1

REPORT OF THE COMMITTEE ON THE UNIFORM TESTS OF 600-700 MATURITY

No conference sponsored projects in the 600-700 maturity classification were carried out in 1962.

V. G. Buchert
H. T. Stinson
G. W. Gorsline, Chairman

REPORT OF THE COMMITTEE ON THE UNIFORM TESTS OF 800-900 MATURITY

A series of 15 inbred lines were crossed to 5 inbred testers. A diallel series involving the 5 testers was also included. Yields are presented separately for the four locations and averaged to give a regional mean. The data presented for the other attributes represent regional means or values for the New Jersey test only. The data are presented in table 3.

R. G. Rothgeb
W. I. Thomas
J. C. Anderson, Chairman

Table 3. Summary of performance of 85 single-crosses (800-900 maturity) grown in 4 locations in 1962.

			bu.	bu.	bu.	bu.	bu.	%	%	angle	1-5
1		C103xW10	100	84	139	85	102	23.4	16	00.0	2.3
2		Pa415	117	70	138	81	102	24.4	09	00.0	2.0
3		Pa887P	112	66	133	88	100	25.6	08	00.0	1.7
4		Pa419	116	67	172	88	111	28.5	24	00.0	1.3
5		Pa91	117	67	163	89	109	29.4	03	00.0	1.7
6		H49	119	76	145	88	107	28.0	10	00.0	1.7
7		Pa890P	98	68	121	75	91	26.2	11	00.0	2.0
8		J47	114	60	159	80	103	29.7	27	01.7	2.7
9		J48	112	68	120	84	96	26.7	08	00.0	2.3
10		J22	102	58	138	69	92	25.2	07	00.0	1.3
11		J482-4a	113	71	152	93	107	28.6	25	00.0	1.0
12		J504-1	118	78	129	69	99	26.8	22	00.7	2.3
13		J504-2	127	62	138	91	105	27.5	07	00.0	3.0
14		J91-5	134	65	150	82	108	27.6	16	00.0	2.7
15	**	J91-6	128	79	145	--	117	29.5	15	00.0	2.7
16		B14xW10	101	50	125	86	91	21.5	01	00.0	2.0
17		Pa415	105	64	133	72	94	24.4	01	00.0	3.0
18		Pa887P	110	73	128	85	99	24.1	00	00.0	2.3
19		Pa419	105	77	129	117	107	26.1	08	00.0	1.3
20		Pa91	100	71	127	92	97	26.7	01	00.0	3.3
21		H49	112	81	132	73	99	25.6	01	00.0	3.0
22		Pa890P	106	65	140	75	96	22.9	05	01.7	2.0
23		J47	85	60	107	60	78	26.6	11	00.0	2.7
24		J48	106	64	132	80	96	23.9	13	00.0	1.3
25		J22	100	70	116	82	92	22.4	03	00.0	1.3
26		J482-4a	113	62	130	92	99	24.9	04	00.0	2.0
27		J504-1	106	59	120	33	79	25.4	07	00.0	2.7
28		J504-2	103	59	143	33	84	26.0	07	00.0	2.7
29		J91-5	103	58	106	63	82	25.9	06	00.0	3.0
30	**	J91-6	115	51	140	--	102	26.9	01	00.0	3.0
31		B37xW10	100	67	108	85	90	22.4	10	00.0	1.7
32		Pa415	120	71	132	76	100	23.1	11	00.0	1.7
33		Pa887P	115	79	127	89	103	25.0	04	00.7	2.0
34		Pa419	112	62	147	101	105	26.4	15	00.0	2.0
35		Pa91	121	60	145	91	104	26.7	04	00.0	2.0
36		H49	109	60	130	86	96	26.2	05	01.7	2.0
37		Pa890P	125	64	145	82	104	24.1	19	14.0	1.0
38		J47	109	64	159	48	95	27.6	30	02.7	3.0
39		J48	106	74	147	77	101	26.3	16	00.0	2.0
40		J22	97	77	114	86	93	23.1	06	00.0	1.0
41		J482-4a	122	80	143	82	107	27.3	22	01.7	1.
42		J504-1	121	48	145	63	94	27.3	07	00.0	2.
43		J504-2	114	70	153	57	98	27.3	06	00.0	3.0
44		J91-5	122	71	136	78	102	27.4	04	05.0	2.3
45	**	J91-6	113	54	150	--	106	29.5	04	02.7	2.3

Table 3 (cont'd.)

	Pedigree	Yield of grain per acre N.J.	Md.	CCRP	Pa.	Mean	kernels moist.	broken plts.	* lodged plants	* 1=best ear parent rating
		bu.	bu.	bu.	bu.	bu.	%	%	angle	1-5
46	B38xW10	104	58	126	68	89	24.1	18	00.0	2.0
47	Pa415	107	36	141	55	85	26.7	20	00.0	3.0
48	Pa887P	105	52	134	66	89	28.2	05	00.0	1.7
49	Pa419	103	56	126	97	95	29.2	06	00.0	1.7
50	Pa91	121	39	152	68	95	27.6	03	00.0	2.7
51	H49	110	46	133	77	92	28.4	16	00.0	2.7
52	Pa890P	104	60	140	62	91	25.2	19	06.7	2.0
53	J47	127	35	155	44	90	29.0	11	03.3	2.7
54	J48	109	39	111	34	73	28.1	20	00.0	3.0
55	J22	103	57	118	73	88	24.4	09	00.0	1.3
56	J482-4a	121	65	133	70	97	28.6	17	07.3	2.3
57	J504-1	110	45	145	24	81	28.0	14	00.0	2.3
58	J504-2	105	58	138	30	83	27.8	09	00.0	3.3
59	J91-5	122	55	140	38	89	28.4	14	03.3	2.3
60 **	J91-6	111	56	150	--	106	29.5	10	00.0	2.3
61	Oh43xW10	96	61	90	65	78	21.6	06	00.0	2.0
62	Pa415	110	73	106	63	88	23.3	07	00.0	1.3
63	Pa887P	104	72	126	80	96	25.2	04	00.0	2.0
64	Pa419	115	79	152	55	100	26.2	10	00.0	1.3
65	Pa91	112	76	118	81	97	25.9	01	00.0	2.3
66	H49	113	70	133	98	104	26.0	02	00.0	2.7
67	Pa890P	79	77	102	75	83	23.9	09	00.0	2.7
68	J47	117	75	104	49	86	26.2	14	01.7	2.3
69	J48	106	86	92	58	86	25.4	11	00.0	1.0
70	J22	108	70	129	87	98	23.2	09	00.0	1.7
71	J482-4a	107	66	115	68	89	26.4	19	00.0	2.0
72	J504-1	102	75	109	77	91	25.1	06	00.0	1.7
73	J504-2	109	66	119	35	82	25.1	03	00.0	2.3
74	J91-5	110	85	120	44	90	25.9	07	00.0	2.0
75 **	J91-6	114	71	134	--	106	25.9	10	01.0	2.3
76	C103xB14	115	83	132	71	100	26.3	02	00.0	2.3
77	B37	120	82	156	96	114	26.1	01	00.0	1.7
78	B38	116	83	161	71	108	27.8	02	00.0	2.3
79	Oh43	108	81	140	112	112	25.2	04	00.0	1.7
80	B14xB37	112	69	127	78	97	23.2	02	00.0	2.0
81	B38	95	47	110	68	80	24.8	02	00.0	3.0
82	Oh43	106	68	118	65	89	23.2	00	00.0	2.7
83	B37xB38	107	59	122	63	88	25.1	02	00.0	2.7
84	Oh43	111	67	125	87	97	24.3	01	00.0	1.7
85	B38xOh43	104	41	125	74	86	26.5	04	00.0	2.0

* New Jersey only.
** Not in Pennsylvania test.

REPORT OF THE COMMITTEE ON STALK ROT

The cooperative stalk rot project initiated 5 years ago by members of the Northeastern Corn Improvement Conference and continued on a voluntary basis by various individuals in several of the northeastern states and Canada was terminated in 1962. Final plantings were made by R. G. Bothgeb in Maryland, W. I. Thomas in Pennsylvania, J. C. Anderson in New Jersey and C. W. Boothroyd and H. L. Everett in New York of single-cross hybrids prepared in 1961 by combining inbreds selected for good standability potential by the members. Data were again taken on such factors as standability (stalk rot, broken plants, and lodging), percentage stand, days to mid-silk and dry matter, and yield of grain.

Plantings of both early and late hybrids were made in Maryland, Pennsylvania and New Jersey, and of early hybrids in New York. In the Maryland plantings there was as much as 84% stalk rot in some of the early hybrids, but less than 20% in the late hybrids. Differences of up to 10 days between mid-silk dates and up to 20 bushels per acre of dry grain were noted between hybrids. A comparison of each of the inbreds used in combination with 6 other inbreds in the single-cross hybrids is given in Table 4. Oh43 and Oh26 performed very well in the early single-cross hybrid tests, and Oh07, Oh26, C103, and 38-11 in the late hybrids.

In the Pennsylvania plantings the amount of stalk rot was low at harvest (less than 5%). There was a marked difference between hybrids with respect to mid-silk date, but no differences were recorded between hybrids for percentage stand, grain moisture, or yield. In the late hybrids the only significant differences between lines were those for yield and days to mid-silk.

In New Jersey there was considerable stalk rot recorded for both early (2-77%) and late hybrids (3-50%). In the early hybrids Oh51A, J48, Oh26, and Oh43 looked promising; in the late hybrids C103, Oh07, Pa70, and 38-11 looked good, although all inbreds revealed less than 25% stalk rot in the diallel tests (Table 4). Pa32 and W37A looked poor in the New Jersey test, showing 44% and 61%, respectively, in the inbred combinations. Broken stalks were most prevalent in the hybrids also containing Pa32 or W37A as inbreds. The same hybrids proved to be the lowest yield producers too, probably as a result of poor standability.

A planting of early single-cross hybrids in New York was attacked by raccoons. Even though many plants were down, most of the ears were untouched. Stalk rot data were taken but data on yield and moisture content of the grain were incomplete. A comparison of the inbreds used in the single-cross hybrids was made as for those in the New Jersey plantings (table 4.) It is interesting to note that 3 inbreds, Oh43, Oh26 and Oh51A, performed well in both New Jersey and New York; however, 3 other inbreds performed differently in the 2 locations. J48 stood well in New Jersey but did very poorly in New York. Pa32 and W37A, on the other hand, performed poorly in New Jersey, but looked very good in New York.

Results of 1962 confirmed those obtained previously. An attempt to devlop (from a common inbred pool) some stalk rot resistant hybrids that might be grown in several areas of the northeastern United States was only successful in part. The majority of the hybrids tested, even in the early maturity groups, were too late for use much above Maryland, New Jersey and southern Pennsylvania. In addition, many of the inbreds showed quite different standability performances in comparable hybrids used in the several locations. In spite of this, a few inbreds looked good in the testing areas, and further breeding work at the local level would seem very worthwhile.

A continued search should be made on a regional basis for inbreds that might be used in combination with those found in this study to be or promise. It again became apparent that any real advances in breeding for stalk rot resistance were dependent upon more information on the fundamental nature of stalk rot and stalk standability.

Table 4. Percentage stalk rot of inbreds in 7 single-cross hybrids in diallel tests in Maryland, New Jersey, and New York, 1962.

Early planting	Av. % in 6 hybrids			Late planting	Av. % in 6 hybrids	
	Md.	N.J.	N.Y.		Md.	N. J.
xOh51A	25	25	26	xC103	5	10
xJ48	40	25	40	x38-11	5	17
xPa32	27	44	18	xOh07	1	11
xW153R	24	30	28	xPa881P	6	24
xW37A	40	61	21	xWF9	10	24
xOh43	14	27	10	xPa70	11	13
xOh26	15	26	22	xOh26	4	23

Regional Stalk Rot Proposal

A proposal for a cooperative regional project on stalk rot similar to that prepared in 1961 was submitted again in 1962 to the Committee of Northeast Directors of Regional Research.

Members of the Northeastern Corn Conference re-evaluated their programs. Sub-projects were submitted by Pennsylvania, New Jersey, New York and West Virginia for research on mineral nutrition, carbon-nitrogen ratio, and water relationship; on pectolytic and cellulolytic enzyme activity; on physiology of the root rot phase in relation to stalk rot phase; and on the biochemical nature of resistance, respectively.

The proposal again was considered favorably by the regional directors but no funds could be allotted for its activation. This was in part the result of a reorganization of administrative procedures for obtaining funds for regional research in the northeast.

J. C. Anderson
M. W. Johnson
J. L. Peterson
R. G. Rothgeb
C. C. Wernham
C. W. Boothroyd, Chairman

REPORT OF THE COMMITTEE ON CORN SILAGE RESEARCH

Cornell

1. Evaluation of varieties in row trials at normal populations for yield of dry matter, percent grain, and calculated TDN. Three maturity groupings were evaluated.

2. Stalk sugar concentration. Refractometer readings made at 3-day intervals from mid-August until early November on 20 corn varieties of differeing maturity and types and on 16 varieties of sorghums, sudans, and millets. All were planted in 36" rows at 30 lbs. per acre. The corn varieties were grown with ears and with ear development prevented.

   The corn treatments rose fairly uniformly in sucrose percentage until September 9-15. The treatment with normal ear development tended to peak at 13-15 percent about September 21, and then decreased rapidly. The treatment with ear formation prevented increase in percentage readings to the 17-19 percent level about October 14 and tended to hold at near this level until November 3, the last reading date before frost.

   The sorghums responded similarly to the earless corn, even though some varieties had reasonable mature seed formed at frost.

3. Bulk plantings of corn, sorghum, and sudan-sorghum hybrids planted in 36" rows, 18" rows, and 7" rows. These materials were not harvested because of poor growth due to drought, and also because similar materials grown in 1961 remain to be utilized in feeding trials in 1962-63. However, the corns were markedly better than other species in tolerating the drought, and weed competition in late summer.

New Jersey

Reported previously at this Conference.

CCRP

Evaluation of row trials of varieties was continued. In addition, several hybrids were compared at different populations. Some rank of hybrids for optimum grain production with changing population was not always the same for silage.

MacDonald

Research has been continued on components of yield in fodder dry matter with emphasis on superiority of flint - dent hybrids over dent hybrids.

West Virginia

In 1960 a study was undertaken at Morgantown to evaluate certain corn hybrids for both quantity and quality of silage produced. A forage evaluation study involving numerous species of grasses and legumes was already well underway. Thus, facilities for analysing forage samples, both by the artificial rumen technique and by direct chemical analysis, were available. Because of limited facilities and budget it was not possible to conduct actual feeding trials.

Four hybrids were selected for testing. In order of maturity from early to late they are: W. Va. B-25, W. Va. 7802, N.J. 8, and N.J.9 (600,700 800, and 900 maturities, respectively). In 1962 three additional hybrids, N.J. 11, N.J. 10, and W.Va. Expt. 1697, were included in the study. These hybrids were planted in one-quarter acre, duplicated plots each in late spring (approximately June 1) after the first cutting of alfalfa-orchard grass had been removed for silage. Each year 700 pounds of 13-13-13 or equivalent was plowed down just before planting and 150# of 10-10-10 was applied in the row at planting. A pre-emergence spray application of 2.5 pounds per acre of atrazine (80W) was applied each year for weed control. The plots were not cultivated.

The plots were harvested in the fall at the optimum stage for silage production (hard dough or glazed stage) with the leaves still green, yields were measured and samples of the forage ensilaged for analysis. After the forage was properly fermented duplicate samples of each were analysed chemically and by means of the artificial rumen technique. Pertinent information obtained on a dry matter (moisture free) and an actual (as fed) basis was: Dry matter, crude protein, digestible protein, digestible energy, and total digestible nutrients (TDN).

The results obtained for the three years are given in table 5.

Table 5. Data obtained on 4 hybrids included in silage trials in West Virginia for a 3-year period, 1960-1962.

Sample	% Dry Matter	% Crude Protein	% dig. Protein	% dig. Energy	TDN (D.M. basis)	TDN Fresh basis)	Yield T./A.	lbs. TDN /A.	Plants/A.
				1960					
N. J. 8	34.2	6.86	2.89	60.98	61.7	21.1	22.00	9284.0	27,000
N. J. 9	35.1	7.05	3.07	65.89	66.6	23.4	23.90	11185.2	28,750
W. Va. 7802	33.1	7.77	3.74	63.89	64.6	21.4	21.50	9202.0	24,500
W. Va. B-25	34.6	8.69	4.59	72.13	72.9	25.2	17.30	8719.2	19,500
				1961					
N. J. 8	30.7	7.41	3.40	62.02	62.7	19.2	20.40	7833.6	16,500
N. J. 9	34.0	7.08	3.10	64.67	65.4	22.2	22.00	9768.0	17,000
W. Va. 7802	31.1	7.26	3.26	63.38	64.1	19.9	19.70	7840.6	16,500
W. Va. B-25	34.4	8.35	4.28	71.18	71.9	24.7	17.90	8842.6	16,000
				1962					
N. J. 8	28.0	8.82	4.71	66.23	67.0	18.7	19.80	7405.2	17,000
N. J. 9	24.3	9.24	5.10	64.78	65.5	15.9	22.76	7237.7	19,500
W. Va. 7802	29.6	9.19	5.05	65.52	66.2	19.5	19.64	7659.6	18,000
W. Va. B-25	29.4	9.40	5.25	69.15	69.9	20.5	16.3	6683.0	16,500
N. J. 10	25.2	10.20	5.99	66.27	67.0	16.8	21.3	7156.8	18,000
N. J. 11	31.3	8.83	4.72	69.06	69.9	21.8	17.06	7438.2	17,000
W. Va. 1697	26.1	8.83	4.72	66.90	67.7	17.6	19.35	6811.2	12,000
				3 year averages					
N. J. 8	30.96	7.70	3.67	63.08	63.8	19.7	20.73	8174.2	
N. J. 9	31.13	7.79	3.76	65.11	65.8	20.5	22.89	9397.0	
W. Va. 7802	31.27	8.07	4.02	64.26	65.0	20.3	20.28	8234.1	
W. Va. B-25	32.80	8.81	4.71	70.82	70.8	23.5	17.17	8242.5	

Pennsylvania

Comparisons of 25-50-100 thousand plant populations of two F_1 double crosses and one F_1 single cross and their F_2's were carried out. Extreme dry weather prevented critical evaluation of the data.

Eight experimental silas of Barren H.S. 50 and (WF9 x Hy)T and of the same two hybrids with grain production are being fed in cooperative nutrition trials.

A diallel set of single-cross hybrids of 500-600 maturity were evaluated for silage production, and stalk sugar concentration. In spite of the extreme drought, hybrid differences were observed in % stalk sugar, total dry matter production and ear dry matter production. Predicted double-cross productions were made in Florida in 1962 and observed as predicted results will be compared in 1963.

H.S. 50 and Pa825 were harvested and weekly intervals from shortly after mid-silk until frost both with and without grain production. Decreased dry matter production and increased % stalk sugar of those treatments where grain formation was prevented as compared to normal, our harvest dates, were similar in these two hybrids.

A similar but more comprehensive program with these materials will be carried out again in 1963.

R. L. Anderson, Chairman
L. L. Donovan
M. W. Johnson
C. E. Manchester
W. I. Thomas
H. M. Yegian (absent)

REPORT OF THE COMMITTEE ON POLLINATING SUPPLIES

40 pound Ripco Aqua Wrap ear shoot bags were purchased cooperatively in 1962 for seven conference members, the Pennsylvania Foundation Seed Cooperative, and the University of Western Ontario as follows:

2 1/2" x 6 1/2"	143,000 bags	at $1.59 per thousand
3" x 8"	115,000 bags	at $3.40 per thousand

The committee is arranging the cooperative purchase of tassel bags in 1963. Four conference members and two non-members have expressed interet in a total of 122,000 bags.

M. W. Johnson
D. L. Matthews, Chairman

REPORT OF THE COMMITTEE ON THE PRESERVATION OF OPEN-POLLINATED VARIETIES

No report submitted.

REPORT OF THE COMMITTEE ON INBRED RELEASE POLICY

There have been no changes in release policies outlined in earlier Northeastern Corn Conference reports.

REPORT OF THE COMMITTEE ON REGISTRATION OF NE HYBRIDS

No applications were made for NE designations during 1962.

REPORT OF THE COMMITTEE ON NOMENCLATURE OF CYTOPLASMIC STERILITY

This committee had previously recommended the use of cms_1, cms_2, etc. to designate the different types of sterile cytoplasm, and the symbols Rf_1, Rf_2, etc. to designate the different pollen restoration factors. This system has not been generally adopted in corn. Furthermore there is no consistency in terminology among the different crops in which cytoplasmic sterility is used in the commercial production of hybrid seed. The need for some uniformity in terminology is obvious.

H. T. Stinson, Chairman

The Chairman requested J. W. Stiles, Research Director for G.L.F. to comment on areas of research needs subject to regional attack as seen from the viewpoint of a farm supply organization. Mr. Stiles pointed out that 70 percent of the corn grown in New York was used for silage. Recent studies have indicated that the TDN requirements of high producing cows is much greater than previously supposed. There is need for a 50 percent increase in silos. Work is needed on the development of less costly but still adequate structures. He raised the question as to the adequacy of current concepts of TDN and whether palatability could realistically be ignored in such evaluations. He stressed the fact that any changes in management or production practices must be considered as a package deal. To illustrate, increased information is needed on the main effects and interactions of such variables as new hybrid combinations, population and fertilization levels and weed control. These in turn must be related to their effect on quantity and quality of silage, feeding operations, butter fat yields and all other items which affect the economy of the operation.

The conference was recessed following this talk.

AFTERNOON SESSION, February 22

The afternoon session was devoted to discussion of several topics and to committee meetings. Summaries of the discussion topics are presented.

Computers in Corn Research

The use of high speed Data Processing equipment in production and research fields of agriculture has increased greatly in the last few years. An acute problem facing enterprises today is the reorganization of its resources to take advantage of such equipment. Research in corn breeding is no exception.

A survey was made of several institutions known to make considerable use of digital computers and the type of programs which are available. There appears to have been a marked change in the last year or so from units of the IBM650 class to similar transistorized versions with somewhat larger memories and high speed printers. The most common programming language appeared to be FORTRAN with some ALGOL and others. The largest computer of the institutions surveyed which had completed installation was the IBM 7090 and at least one desk sized computer was reported as being available.

In general, several programs of interest to Plant Breeding and Genetics Research, are available and more will be available in the very near future.

Numerous A.N.O.V. programs have been completed for Randomized Complete Block, Split-plot Triple Lattice, Rectangular Lattice, Cubic Lattice and Lattice Square designs. Other types of programs include several variations for correlations, regressions, covariance, combining locations or years of several ANOV, double-cross-hybrid prediction from single cross data, data conversion rountines, deviation of means, standard deviation and coefficient of variation from groups of data.

W. I. Thomas
G. W. Gorsline

Inheritance of Differential Element Accumulation in the Corn Ear Leaf

Ca, Sr, K, Mg, P, Cu, B, Un, Mn, Al, and Fe are determined on leaf material sampled about 30 days past silk. A recording spectrometer has been used.

With the early material (table 6), average or line effects were important for all the elements studied. With Sr, Mg, P, Cu, and B some non-additive gene action was indicated. Inbred results are also given for this material (table 7.).

The late material had important average or line effects for all elements except Zn, Fe, and Mn. The line x location interaction was significant for all elements except Cu and Zn. Non-additive gene action was indicated for Mg, K, P, and Al. A non-additive x location was manifested for P and Mn.

Location effects were important for all the eleven elements studied. Studies just completed seem to indicate characteristic seasonal and morphological position trends for these elements.

It has been found that Helminthosporium leaf blight severity was negatively correlated with K and positively correlated with Ca and Zn. Relationships with other economic characters have so far been found to be low and variable.

Several difficulties in analysis, sampling, and interpretation have become apparent. For example, inbred plants of particularly low stature may carry extremely high Al and Fe as illustrated by the line K53 (table 8). In addition, we have very limited indication that soil variability from plants in adjacent positions may complicate segregation interpretations.

G. W. Gorsline
W. I. Thomas
D. E. Baker

Table 6. Mineral content of the ear leaf of 36 late maize single cross hybrids averaged over their 9 inbred parents and also expressed as mean and range of the single crosses and locations. (These hybrids were grown near Allentown and Lancaster, Pennsylvania.)

Factor		Ca	Sr	K	Mg	P	Cu	B	Zn	Mn	Al	Fe	Sr/Ca x 10^3
		%	P.P.M.	%	%	%	P.P.M.	P.P.M.	P.P.M.	P.P.M.	P.P.M.	P.P.M.	
Pa 70	Progeny Mean	0.98	22	1.89	0.26	0.37	20	16	57	150	61	113	2.25
Pa 881P	Progeny Mean	0.76	18	2.08	0.25	0.35	16	12	49	115	54	101	2.34
Pa 886P	Progeny Mean	0.87	20	1.90	0.30	0.44	19	13	60	172	54	110	2.33
Pa 887P	Progeny Mean	0.79	18	2.03	0.29	0.44	18	13	42	187	50	105	2.34
CI 317B	Progeny Mean	0.82	19	1.88	0.32	0.34	20	18	51	139	41	94	2.39
C 103	Progeny Mean	0.74	16	2.05	0.18	0.39	17	13	58	171	54	104	2.25
B 14	Progeny Mean	0.88	19	1.70	0.33	0.37	19	15	60	135	50	102	2.23
Wf9	Progeny Mean	0.80	18	1.92	0.32	0.28	24	14	59	145	58	109	2.32
Pa 94	Progeny Mean	0.93	20	1.83	0.26	0.47	19	15	58	172	55	106	2.23
Mean of Single Crosses		0.84	19	1.92	0.28	0.38	20	14	56	155	54	106	2.29
High Single Cross		1.09	24	2.38	0.40	0.64	28	22	75	216	68	123	2.52
Low Single Cross		0.59	13	1.52	0.15	0.21	12	8	33	97	36	86	2.09
Allentown Mean		0.90	15	1.73	0.33	0.52	18	16	27	76	46	88	1.69
Lancaster Mean		0.78	22	2.11	0.23	0.24	22	12	93	245	69	124	2.89
L.S.D. (Progeny Means) (5%)		0.03	0.6	0.06	0.02	0.03	2.2	1.0	7.7	12.3	3.2	6.5	.08
L.S.D. (Single Crosses) (5%)		0.08	1.9	0.17	0.04	0.09	6.2	2.9	21.7	34.1	9.0	18.5	.21
L.S.D. (Locations) (5%)		0.02	0.5	0.04	0.01	0.02	1.5	0.7	5.1	8.2	2.1	4.4	.05

Table 7. Mineral content of the ear leaf of 66 early maize single cross hybrids averaged over their 12 inbred parents and also expressed as mean and range of the single crosses. (These hybrids were grown near Knoxville, Pennsylvania during 1960.)

Factor		Ca	Sr	K	Mg	P	Cu	B	Zn	Mn	Al	Fe	Sr/Ca x 10^3
		%	P.P.M.	%	%	%	P.P.M.	P.P.M.	P.P.M.	P.P.M.	P.P.M.	P.P.M.	———
Pa W 703	Progeny Mean	0.80	14	1.84	0.32	0.24	17	17	63	61	42	123	1.82
Pa 32	Progeny Mean	0.81	16	2.14	0.31	0.46	18	15	55	48	50	125	1.93
W 37A	Progeny Mean	0.84	16	1.86	0.29	0.35	18	13	57	50	37	108	1.81
W 59M	Progeny Mean	0.80	12	2.03	0.24	0.25	15	16	48	46	55	128	1.53
CMD 5	Progeny Mean	0.89	17	2.00	0.35	0.25	20	14	50	40	51	112	1.90
Co 106	Progeny Mean	0.88	18	2.05	0.32	0.28	23	15	66	47	44	118	2.03
Ms 1334	Progeny Mean	0.63	11	2.10	0.24	0.38	18	13	54	46	51	120	1.77
A 495	Progeny Mean	0.86	15	2.06	0.28	0.30	15	12	39	30	41	109	1.71
A 509	Progeny Mean	0.71	13	2.39	0.32	0.35	20	16	51	49	51	120	1.88
R 53	Progeny Mean	0.88	14	1.98	0.27	0.40	18	15	58	40	53	130	1.57
Pa 36	Progeny Mean	0.80	14	2.20	0.28	0.48	22	15	34	41	54	130	1.69
W H	Progeny Mean	0.98	17	2.25	0.33	0.23	22	16	41	44	40	116	1.78
Mean of Single Crosses		0.82	15	2.07	0.30	0.33	19	14	51	45	47	120	1.78
High Single Cross		1.19	24	2.80	0.45	0.65	34	23	82	84	75	182	1.98
Low Single Cross		0.60	9	1.67	0.18	0.14	11	7	12	19	29	87	1.55
L.S.D. (Progeny Means) (5%)		0.05	1.0	0.12	0.02	0.04	1.6	1.5	22.8	8.5	11.5	17.9	0.11
L.S.D. (Single Crosses) (5%)		0.16	3.2	0.40	0.08	0.10	5.5	5.0	75.7	28.3	38.1	59.3	0.36

Table 8. Mineral content of the ear leaf of 12 inbred maize lines grown near Knowville, Pennsylvania in 1960. (These 12 lines are the parents of the 66 single crosses whose corresponding data is given in Table 7 and were grown in a contiguous experiment.)

	Ca	Sr	K	Mg	P	Cu	B	Zn	Mn	Al	Fe
Factor	%	P.P.M.	%	%	%	P.P.M.	P.P.M.	P.P.M.	P.P.M.	P.P.M.	P.P.M.
Pa W 703	0.78	15	1.44	0.26	0.16	15	12	40	70	130	230
Pa 32	0.82	13	1.69	0.25	0.18	20	19	14	48	76	164
W 37A	0.89	17	2.18	0.36	0.30	14	10	20	32	41	99
W 59M	0.86	10	2.20	0.20	0.31	10	20	19	40	120	255
CMD 5	0.84	16	2.22	0.36	0.15	19	16	22	28	48	132
Co 106	0.88	18	1.89	0.40	0.21	23	18	40	54	115	244
Ms 1334	0.42	7	1.54	0.13	0.41	12	8	14	37	252	350
A 495	0.77	14	2.26	0.16	0.21	14	12	42	18	112	250
A 509	0.50	9	2.06	0.21	0.31	14	15	14	37	160	280
R 53	0.77	12	2.22	0.23	0.60	18	15	25	46	350	350
Pa 36	0.74	12	2.76	0.32	0.72	28	11	15	38	92	216
W H	0.80	15	2.07	0.30	0.21	18	16	12	50	105	250
Mean	0.76	13	2.04	0.25	0.32	17	14	23	42	133	235
L.S.D. (Inbreds)(5%)	0.14	3.6	0.43	0.03	0.02	3.8	NS	NS	NS	93.2	NS

Picker-shellers in corn trials

On the basis of extensive discussion it was concluded:

1. For standard sized plots, time and labor requirements were similar for hand or picker-sheller harvesting.

2. For kernel moisture contents above 26 percent the use of the picker-sheller may result in slower harvesting because of the time required for the machine to clean out after each plot.

3. For commercial trials the picker-sheller was superior since it more nearly approximated harvested yields which would be obtained under standard farm harvesting procedures.

4. For certain types of experimental studies hand harvesting is preferable to the picker-sheller.

Barren vs. normal corn for silage

In some areas of New Jersey bird damage is severe ranging up to a loss of 60 percent of potential grain yield. Under such conditions there is a possibility that the increase in dry matter accumulation in stover of barren corn may result in higher harvestable yields than can be obtained under conditions of extensive bird damage. The barren condition was induced by covering ear shoots; the normal and barren versions are therefore of similar genotypes. The data are presented in table 9.

The interaction of plant population x barrenness was significant at the P-.05 level.

	Plant Population				
	12	18	25	37	Mean
Normal	121	134	137	142	133
Barren	101	113	120	124	115
Barren in percent normal	84	87	88	88	

The interaction between date of harvest and barrenness was significant at the P= .01 level.

	Weeks past midsilk			
	4	6	8	Mean
Normal	120	135	143	133
Barren	109	117	119	115
Barren as percent of normal	91	87	83	

Table 9. Comparisons of barren vs normal corn grown for silage in 1962.

Plant pop. M.	Weeks past mid-silk	Dry matter per acre					
		Total		Ears 1/		Stover	
		Normal cwt.	Barren cwt.	Normal cwt.	Barren cwt.	Normal cwt.	Barren cwt.
12	4	108	94	43	23	65	71
	6	125	110	66	31	59	79
	8	129	101	72	21	57	79
18	4	115	114	34	25	81	89
	6	135	111	65	29	70	82
	8	144	118	78	29	66	89
25	4	126	110	28	20	98	90
	6	139	127	58	28	81	99
	8	146	122	72	26	74	96
37	4	132	117	34	20	98	97
	6	141	121	50	26	91	95
	8	153	135	58	26	95	109

1/ Includes ear, husk and shank.

Table 9 (cont'd.)

Dry matter content				Sucrose 2/ equiv.	
Ears		Stover			
Normal %	Barren %	Normal %	Barren %	Normal %	Barren %
27.3	18.0	20.9	23.2	11.6	14.5
42.4	21.7	19.0	23.7	8.7	14.2
49.2	22.9	21.2	26.2	8.6	13.1
24.3	17.2	22.5	23.4	12.2	15.3
39.8	20.8	21.2	23.5	8.1	15.1
48.4	26.5	22.5	26.1	6.3	13.9
21.8	17.0	23.2	23.1	13.4	14.6
35.3	21.5	20.5	24.2	9.1	15.6
49.5	24.5	20.6	25.7	8.5	14.9
22.9	16.7	23.5	22.9	10.6	14.9
33.2	20.2	21.3	22.7	7.2	13.9
40.3	22.9	23.8	24.7	9.9	12.8

2/ Refractometer reading of sap from first internode below primary ear.

COMMITTEE PROPOSALS FOR THE 100-200 UNIFORM TESTS IN 1963

Based on predictions of 1962 single cross data, double-cross seed of those hybrids suggested by interested conference members will be made up for cooperative testing. All possible predictions have been furnished to members of the committee.

R. I. Brawn
L. S. Donovan
H. L. Everett
W. I. Thomas, Chairman

COMMITTEE PROPOSALS FOR THE 300-500 UNIFORM TESTS IN 1963

Two all-combination single cross trials were produced in New York in 1962. The first series included the following inbreds:

(1)	W144	(6)	WA374
(2)	A495	(7)	ND230
(3)	NYN22	(8)	C153
(4)	MSA2	(9)	NY821
(5)	PA41	(10)	NY511

Among these inbreds ND230 was very early while MSA2 was extremely late for the Aurora Farm, however, all crosses were made successfully in at least one direction. The two exceptions were MSA2 x ND230 (seed for 15 replications) and WA374 x ND230 (same). In 1963 six replications will be grown in Pennsylvania and six replications in New York. C.C.R.P. (Eastern States) will plant 1 replication and Massachusetts will be requested to handle two replications, if so desired.

The second series consisted of the following inbreds:

(1)	Pa37	(7)	ES 191-71
(2)	Ia. B8	(8)	A297
(3)	Pa 405	(9)	A491
(4)	NY D16	(10)	W64A
(5)	NY D410	(11)	MS116
(6)	NY W22	(12)	MS109

The quality of seed as well as the quantity was not favorable due to field location and inadequate rainfall. No seed is available for the two combinations ES 191-71 x MS109 and A297 x A401. Several other

singles are in relatively short supply. Where possible in light of supply Pennsylvania will be sent seed for six replications, and New York will retain enough seed for a similar planting, Massachusetts, Connecticut, and Michigan will be contacted to determine possible interest in this test.

Hybrid combinations (3-way and double crosses) have been or will be predicted from the 1962 program results. A great many more hybrids will be predicted from the 1963 proposed plantings. Many of these hybrids will be produced in the next two to three seasons. It is our suggestion that this conference through its several committees on maturity groups serve as a "clearing house" for hybrid combinations. In this way if a common hybrid were offered for commercial release by two members of the conference, there would be opportunity for one state to step aside and allow the other state designation to represent the hybrid or both states could agree to the use of an NE designation with suitable arrangements for commercial release. In any event a mutually satisfactory agreement could be reached at an early date when common interest in a particular combination became evident.

It is further suggested that hybrids presently in the 500 series with excellent performance but no prospects for commercial release, be entered in regular Station trials as interest and entry numbers allow. No special uniform tests of 3-way or double cross hybrids are proposed at this time.

G. W. Gorsline
C. E. Manchester
H. M. Yegian
H. L. Everett, Chairman

Following the presentation of this report H. L. Everett MOVED "That this conference, through its several committees on maturity groups, serve as a clearing house for hybrid combinations to avoid duplicate designations and release and to ensure cooperation on seed increase and hybrid designation.

The motion was seconded and passed.

COMMITTEE PROPOSALS FOR THE 600-700 UNIFORM TESTS IN 1963

No cooperative crossing blocks are contemplated for 1963.

The following four-way hybrids were predicted from the 1960 NECIC Stalk Rot committee tests, made by Pennsylvania, tested in 18 reps by Pennsylvania in 1962, and found satisfactory in yield and stalk quality.

(Oh07 x Oh43)(Oh51A x A401)
(Oh43 x A401)(Oh51A x Oh26)
(Oh07 x C103)(Oh43 x Oh51A)
(Oh07 x C103)(Oh43 x Oh26)
(Oh07 x C103)(Oh43 x A401)
(Oh07 x C103)(Oh51A x Oh26)
(Oh07 x C103)(Oh26 x A401)
(Oh07 x C103)(Oh51A x A401)

This committee recommends and moves that the maturity committees be reconstituted as:

100 - 300
400 - 600
700 - 900

and that the present 600-700 committee be disbanded.

J. G. Buckert
G. W. Gorsline, Chairman

The motion "That the maturity committees be reconstituted as follows: 100-300, 400-600, and 700-900 and that the present 600-700 committee"be disbanded was seconded and passed.

COMMITTEE PROPOSALS FOR THE 800-900 UNIFORM TESTS IN 1963

Each interested state will make its own doubles from the 1962 results and predictions.

Penna. will furnish seed of about 120 selected double crosses for testing in Penn., N. J. and Md. There will be no other cooperative effort in the 1963 season. It is suggested that new inbreds may be ready for combining in 1964 for 1965 testing. No change in committee personnel was discussed.

J. C. Anderson
R. G. Rothgeb
W. I. Thomas

COMMITTEE ON STALK ROT DISEASES

C. W. Boothroyd will be on sabbatical leave until August 1963. During his absence C. C. Wernham will serve as Chairman pro-tem. The cooperative regional project on stalk rot submitted to the Committee of Northeast Directors of Regional Research will be re-written and re-submitted for regional approval.

J. C. Anderson
C. W. Boothroyd
M. W. Johnston
J. L. Peterson
R. G. Rothgeb
C. C. Wernham, Chairman Pro-tem

COMMITTEE ON CORN SILAGE

No meeting was held during the year. Several requests were filled for seed of the varieties suggested as uniform entries in silage trials.

Similar research programs as used in 1962 are suggested for 1963 as considered desirable by each cooperator. Further it is suggested that any new evaluation technique which appears to have merit should be circulated to cooperating members as soon as possible.

The committee again requests that whenever possible the following hybrid varieties be used in silage studies to serve as a possible basis for cross comparisons.

Early hybrids	Pa290 & Cornell M-3
Medium hybrids	Cornell M-3 & Pa602A
Late hybrids	Pa602A, Conn. 870, NJ8

The proposed regional project on corn silage research was not completed because of the uncertainty as to the requirements for such a project write-up at the August date suggested. Under current procedures, with funding by individual stations and with all contributing station projects to be included in the regional project statement, regional interest has been reassessed. Such a project still seems desirable and with the approval of the conference the silage committee will re-draft a project based on the objectives as currently seen and the proposed participation of individual stations.

L. S. Donovan
M. W. Johnson
C. E. Manchester
W. I.Thomas
H. M. Yegian
R. Anderson, Chairman

A motion was made "That the committee on corn silage be encouraged to develop a regional project and submit this project for consideration by the committee of Northeast Directors of Regional Research. Seconded and passed.

BUSINESS MEETING

It was MOVED by Johnson and seconded by Anderson that all committee reports and proposals be accepted and approved. Motion carried.

The nominating committee proposed R. I.Brawn as Vice-chairman for 1963. There being no nominations from the floor the secretary was instructed to cast a unanimous ballot for Dr. Brawn.

Chairman Matthews expressed his appreciation to committee members for their support during the year and then turned the meeting over to the new Executive Chairman, Dr. W. I.Thomas.

Chairman Thomas made a number of new committee assignments which are recorded in the section on Officers and Committee Members for 1963-64.

It was MOVED by Matthews that the next conference meet either in February 21-22 or 28-29, the exact time and place of the meeting to be left to the discretion of the Chairman. This motion was seconded and passed.

Meeting adjourned at 11:30 a. m.

OFFICERS AND COMMITTEE MEMBERS, 1963-1964

Administrative Advisor
H. R. Fortmann

Executive Committee
W. I. Thomas, Chairman
R. I.Brawn, Vice-chairman
D. L. Matthews

Committee on Registration of NE hybrids
R. G. Rothgeb, Chairman
J. C. Anderson
H. L. Everett
G. W.Gorsline
W. I. Thomas

Committee on Uniform tests of 100-300 maturity
L. S. Donovan, Chairman
R. M. Bailey
R. I. Brawn
H. L. Everett
G. W. Gorsline
W. I. Thomas

Committee on Uniform tests of 400-600 maturity
H. L. Everett, Chairman
G. W. Gorsline
C. E. Manchester
H. M. Yegian

Committee on Uniform tests of 700-900 maturity
J. C. Anderson, Chairman
J. G. Buchert
R. G. Rothgeb
W. I. Thomas

Committee on Pollinating Supplies
D. L. Matthews, Chairman
M. W. Johnson

Committee on Nomenclature of Cytoplasmic Sterility
H. T. Stinson, Chairman
H. L. Everett

Committee on Stalk Rot Diseases

C. C. Wernham, Chairman pro-tem
J. C. Anderson
C. W. Boothroyd
M. W. Johnson
J. L. Peterson
R. G. Rothgeb

Committee on Inbred Release Policy

J. C. Anderson, Chairman
H. L. Everett
D. L. Matthews
W. I. Thomas

Committee on Corn Silage

R. W. Miller, Chairman
R. Anderson
L. S. Donovan
M. W. Johnson
C. E. Manchester
W. I. Thomas
H. M. Yegian

ROSTER OF ATTENDANCE

Canada		
Brawn, R. I.	MacDonald College	Montreal
Donovan, L. S.	Central Expt. Farm	Ottawa
Delaware		
Cole, R. H.	Univ. of Delaware	Newark
Maryland		
Rothgeb, R. G.	University of Maryland	College Park
Sprague, G. F.	ARS - U.S.Dept. Agr.	Beltsville
Massachusetts		
Buchert, J. G.	Coop. Corn Res. Project	W. Springfield
Manchester, C. E.	" " "	"
Matthews, D. L.	" " "	"
New Jersey		
Anderson, J. C.	Rutgers University	New Brunswick
New York		
Cassalett, Climaco	Cornell University	Ithaca
Edmunds, Joseph	"	"
Everett, H. L.	"	"
Jones, E. M.	"	"
Miller, R. E.	"	"
Miller, R. W.	"	"
Stiles, J. W.	G. L. F.	"
Pennsylvania		
Craig, W. F.	Penn State University	State College
Fortmann, H. R.	"	"
Gorsline, G. W.	"	"
Thomas, W. I.	"	"
Wernham, C. C.	"	"
West Virginia		
Johnson, M. W.	University of W. Virginia	Morgantown